

Discussion.—Other than lancet characters as illustrated, this species may be separated by the orange upper half of the mesopleuron, orange front femora and coxae, orange mesoscutellum, and sessile anal cell of the hindwing. It is named for the collector, Dr. William M. Mann.

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A NEW GENUS AND TWO NEW SPECIES OF LISTROPHORID
FUR MITES FROM NORTH AMERICAN SHREWS

(ACARINA: LISTROPHORIDAE)¹

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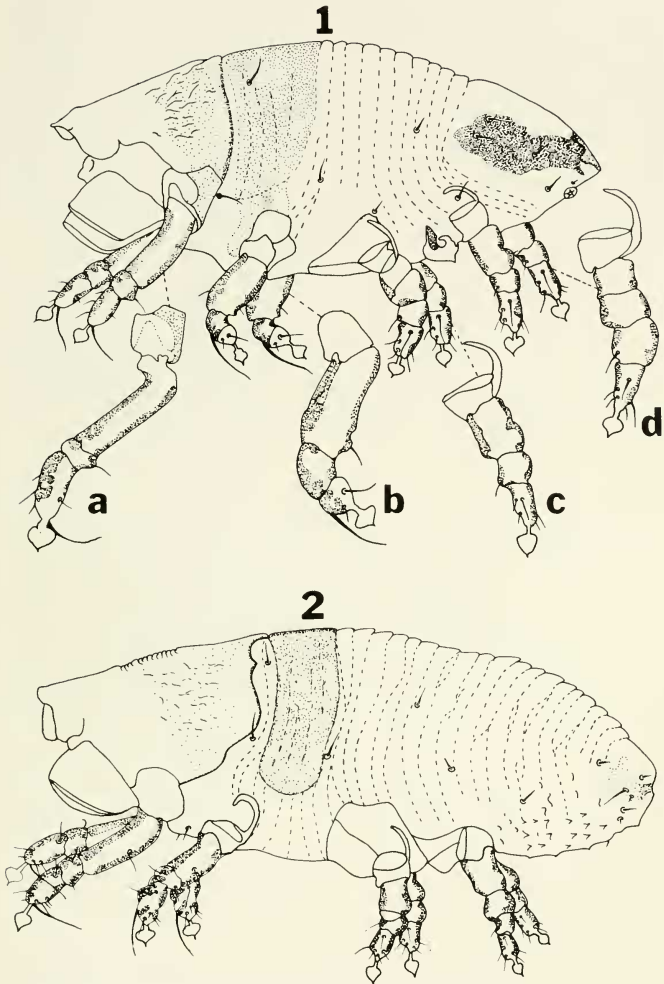
ABSTRACT—A new genus and two new species are described, **Olistrophorus**, n.g. (type species *O. cryptotae*), **O. cryptotae** (type-host, *Cryptotis parva parva*), **O. blarina** (type-host, *Blarina brevicauda* are described as new. All of these are ectoparasites on members of the order Insectivora (shrews) from the United States.

The only record of a listrophorid fur mite recorded from the order Insectivora is the species *Asiochirus suncus* (Radford) collected from the musk shrew, *Suncus caeruleus giganteus* Geoffrey, in Colombo, Ceylon, May 20, 1944.

Material collected by the authors from two species of shrews, *Cryptotis parva parva* (Say), from Texas and *Blarina brevicauda kirtlandi* Bole and Moulthrop from Indiana extends the host range of listrophorid species parasitizing shrews to include the Nearctic realm of the Western Hemisphere.

The species collected from *S. caeruleus giganteus* has recently been placed in a new genus by Fain (1970). In the newly established genus

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Figs. 1, 2. *Olistrophorus cryptotae*, n. gen., n. sp.: 1, holotype male; 1a-d, enlargement of legs I-IV, respectively; 2, allotype female.

Asiochirus two other species, *A. platanthomys* collected from *Platanthomys lasiurus* (the spiny Dormice from India) and *Myospalax psilurus* (a mole-rat from China) were collected from hosts quite different from that of a shrew. The species *A. suncus* does not fit within the newly erected genus in this paper. Due to its close morphological association with listrophorids that have been taken from the order Rodentia it is believed that the possibility exists that the host *S. caeruleus giganteus* may be an accidental host of *A. suncus* and its true host is a member of the order Rodentia and was on the shrew due to the feeding habits of this large shrew.

Genus **Olistrophorus**, n. gen.

Type-species: *Olistrophorus cryptotae*, n. sp.

Body egg-shaped with pointed anterior head plate, males with large flattened aedeagus. Females with angle-like annulations on opistosomal region. Legs with numerous simple setae, flap-like region large extending to gnathosomal region. Propodosomal plate well developed with characteristic sclerotization and associated setae. Opistosomal plates of males either heavily or lightly sclerotized, anal suckers small associated with small setae.

Olistrophorus cryptotae, n. sp.

Male: Body laterally compressed, egg-shaped, numerous fine annulations posterior of propodosomal plate. Legs well-developed. Coxae I highly modified, of usual listrophorid type, that is with flap-like plates to clasp hairs of host (fig. 1). Dorsum with well-developed head, propodosomal and opistosomal plates. Head plate narrowing to a point at the anterior end, enclosing coxa of first pair of legs, beset with a pair of simple setae. Propodosomal plate extending to coxal region of second pair of legs, beset with two pairs of simple setae, one located on the dorsal section of the plate, the other located on the lateral section of plate near coxa of second pair of legs. Opistosomal plate divided extending from coxal region of leg four to posterior end of body beset with four pairs of simple setae on each section. Ventrally the gnathosomal with prominent head plate covering mouthparts, not clearly delineated in mounted specimens. Coxae I well developed, flap-like, setae absent. A pair of simple setae placed between coxae of legs I and II. Coxal apodemes of legs III and IV open. Two pairs of microsetae placed near apodemes of genitalia. Genitalia shaped as shown in fig. 1. A pair of anal suckers associated with a pair of microsetae. All legs with canicals, legs I longest, II shortest. Legs II and III subequal in length, III thicker than IV. Chaetotaxy of legs as shown in figs. 1a, 1b, 1c, 1d. Length .344 mm, width .149 mm, (taken between legs III and IV).

Female: Body laterally compressed as in male, numerous fine annulations. Legs well developed, similar in structure as male. Propodosomal plate similar to male. Opistosomal region without anal plates and anal suckers. Chaetotaxy of podosoma consisting of six pairs arranged as shown in fig. 2. Opistosoma and portions of metapodosoma with two types of annulations, dorsal region with typical line-like annulations, ventrally replaced by small angled-like humps. Chaetotaxy of opisto-

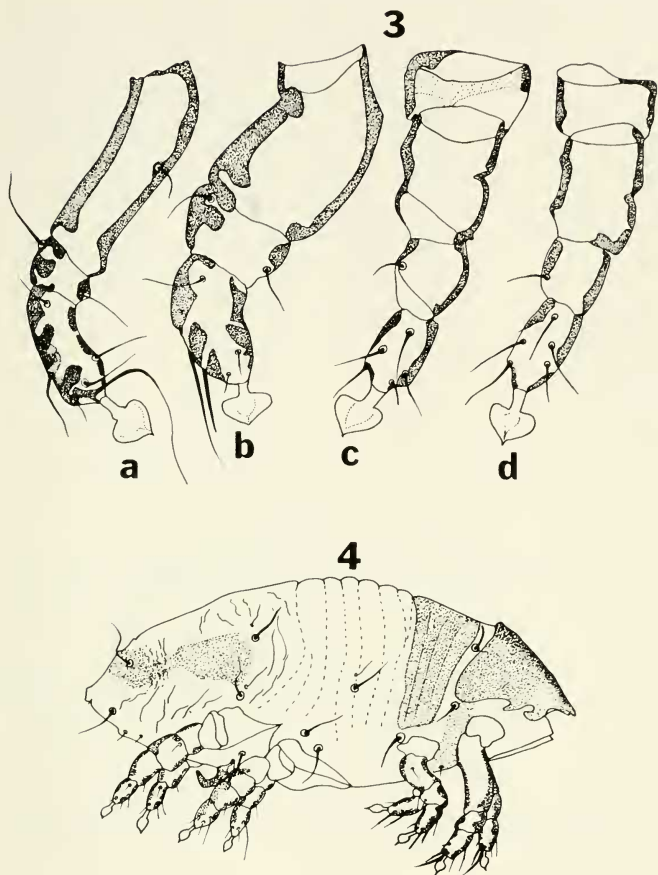
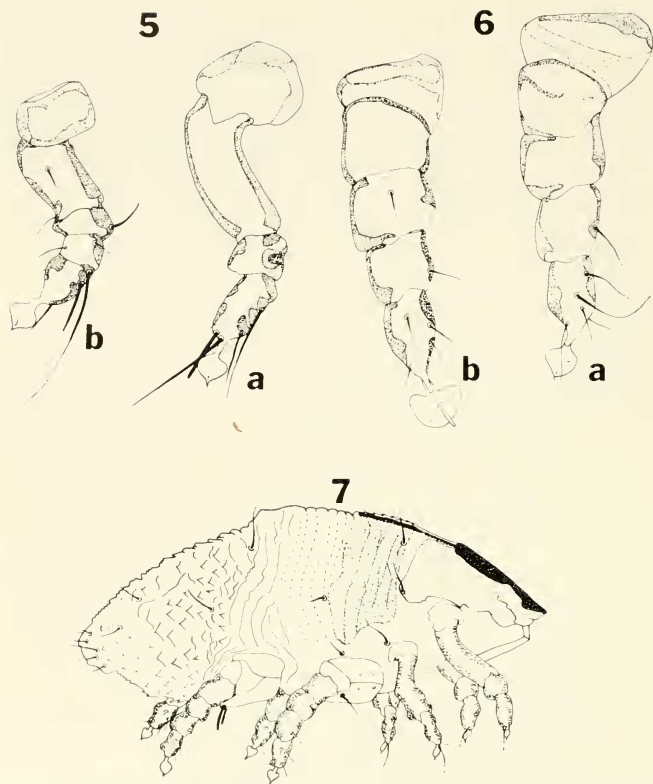


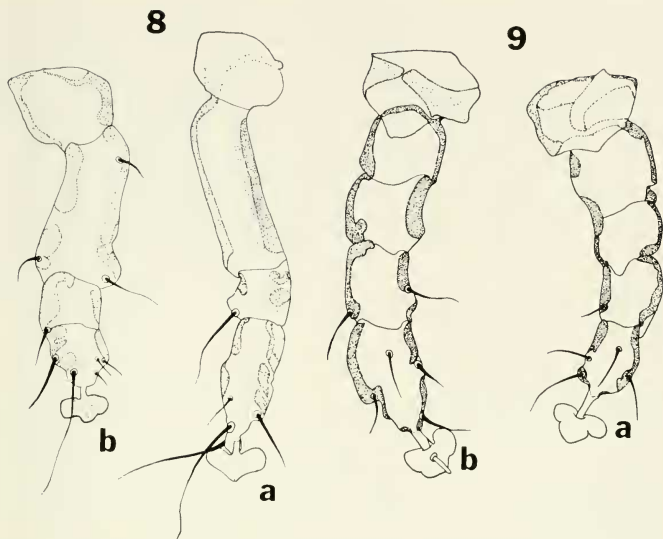
Fig. 3. *Olistrophorus cryptotae*, n. gen., n. sp.: 3a-d, enlargement of legs I-IV, respectively, of female. Fig. 4. *O. blarinae*, n. sp.: holotype male.

soma with six pairs of microsetae. Ventrally with Coxae I modified as male, genital area open not enclosed by leg apodemes. A pair of microsetae located between coxal apodemes of legs I and II. All legs with conicals. Chaetotaxy of legs as shown in figs. 3a, 3b, 3c, and 3d. Length .419 mm, width 1.67 mm (taken between legs II and III).



Figs. 5-7. *Olistrophorus blarinae*, n. gen., n. sp.: 5a-b, enlargement of legs I and II, respectively, of male; 6a-b, enlargement of legs III and IV, respectively, of male; 7, allotype female.

Type Material: Holotype male (colln. no. BMD 554), collected by B. McDaniel and H. D. Burnett, from the least shrew, *Cryptotis parva parva* (Say), 14 miles S.E. Kingsville, Kleberg Co., Texas, 6 February 1966, Host-male, (discarded). Allotype female (colln. no. BMD 555), with same collection data as holotype, Host-male, (discarded). Other paratypes include three males (colln. nos. BMD 556-8), all with same collection data as holotype, Host-BMD 556 female, BMD 557-8 male. Three females (colln. nos. BMD 559-11) collected in same locality as



Figs. 8, 9. *Olistrophorus blarinae*, n. gen., n. sp.: 8a-b, enlargement of legs I and II, respectively, of female; 9a-b, enlargement of legs III and IV, respectively, of female.

holotype, on 7 April 1963 by B. McDaniel and S. Casto. Holotype, allotype in United States Natural Museum; remaining material in the collection of the author.

Olistrophorus cryptotae, n. sp. is most closely related to *O. blarinae*, but differs from it by very distinctive shape of the male aedeagus, overall size of the female, *O. cryptotae* being larger than *O. blarinae*, the absence of the enlarged setae between the coxal apodemes of leg IV of the female and shape of the propodosomal shield of both male and female extending to ventor.

***Olistrophorus blarinae*, n. sp.**

Male: Body laterally compressed, egg-shaped, numerous fine annulations posterior of propodosomal plate. Legs well-developed. Coxae I modified of usual listrophorid type, that is with flap-like plates to clasp hair of host (fig. 4). Dorsum with well-developed head, propodosomal and opistosomal plates. Head plate narrowing to a point at anterior end, with rounded lateral margins and associated with flap-like plates of coxae I. Propodosomal plate as shown in fig. 4 with two pairs of simple setae located near margin of head plate. Opistosomal plate lightly

sclerotized, located near posterior region of the opistosomal region. Anal suckers present. Dorsal setae arranged as shown in fig. 4. Ventrally the gnathosoma with prominent head plate covering mouth parts, not clearly delineated in mounted specimens. Genitalia well-developed associated with a pair of small setae, shape as shown in fig. 4. All legs with conicals, legs I longest, II shortest. Legs II and IV subequal in length and width. Chaetotaxy of venter and legs as shown in figs. 5a, b, 6a, b. Length .326 mm, width .140 mm (taken between legs II and IV).

Female: Body shaped as in male, except opistosomal region narrowing at most posterior region into a more blunted terminal ending. Propodosomal plate similar to male. Chaetotaxy of dorsum as shown in fig. 7. Opistosomal and portions of metapodosoma with two types of annulations, region anterior to legs IV with typical line-like annulations, region behind legs IV with angled-like annulations. Ventrally with two pairs of genital suckers between legs II and III. A large pair of club-like setae located between apodemes of legs IV. All legs with conicals. Chaetotaxy of legs and venter as shown in figs. 8a, b, 9a, b. Length .400 mm, width .167 mm (taken between legs II and III).

Type Material: Holotype male (JOW-5176-a) together with three male paratypes (JOW 5176b, c, d), collected by J. O. Whitaker, Jr., from *Blarina brevicauda*, Willow Slough, Newton County, Indiana, 16 August 1969. Allotype female (JOW 517e), with same data as type. Other paratypes include two females, JOW 5263, 5264, from *Blarina brevicauda*, Turkey Run, Parke County, Indiana, 8 October 1969. Holotype, allotype, in United States Natural Museum, remaining material in collection of authors.

Olistrophorus blarinae, n. sp. is most closely related to *O. cryptotae*, but differs from it by the difference in the shape of the male aedeagus, the smaller size of the female, and the presence of the enlarged setae between the coxal apodemes of leg IV of the female.

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